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Before The  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

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In the Matter of )  
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Amendment of Section 2.106 of the ) ET Docket No. 95-18  
Commission's Rules to Allocate )  
Spectrum at 2 GHz for Use by the )  
Mobile Satellite Service )  
 )

COMMENTS OF GLOBALSTAR, L.P.

Pursuant to Section 1.415 of the Commission's Rules, Globalstar, L.P., submits these comments on the Third Notice of Proposed Rule Making in the above-referenced docket.<sup>1</sup> Globalstar is an applicant for a Mobile-Satellite Service ("MSS") system using the frequencies allocated for MSS at 2 GHz,<sup>2</sup> and has participated in earlier stages of this proceeding. Accordingly, Globalstar has a substantial interest in the rules adopted for the 2 GHz MSS allocation.

In the Third NPRM, the Commission has raised a number of issues regarding relocation of incumbent terrestrial services in the spectrum allocated for MSS at 2 GHz. Specifically, the Commission seeks comment on procedures for relocation of Broadcast Auxiliary Service ("BAS") stations in the 1990-2025 MHz MSS uplink frequencies and relocation of Fixed Microwave Service ("FMS") stations in the 2165-

<sup>1</sup> Memorandum Opinion and Order and Third Notice of Proposed Rule Making and Order, FCC 98-309 (released Nov. 25, 1998) ("Third NPRM").

<sup>2</sup> File Nos. 182-SAT-P/LA-97(64) and 183 through 186-SAT-P/LA-97.

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2200 MHz downlink frequencies. The Commission also seeks comment on cost apportionment issues among MSS licensees in the MSS spectrum. Additionally, because FMS station links in the 2165-2200 MHz band are paired with links in the 2115-2150 MHz band, the Commission must determine how to apportion costs between MSS licensees and licensees of the proposed new wireless service (“NWS”) at 2110-2150 MHz.

As the discussion in the Third NPRM makes clear, the issues related to relocation of BAS and FMS stations in the 2 GHz MSS spectrum are complex and unwieldy. Complicating these matters is the fact that the Commission has decided to use the relocation procedures adopted for Personal Communications Services (“PCS”) in the Emerging Technologies docket.<sup>3</sup> Third NPRM, ¶ 35. Those procedures were designed for a completely different scenario: relocation of FMS stations by PCS licensees with rights to exclusive spectrum in exclusive geographic markets. In contrast, many 2 GHz MSS licensees are likely to share spectrum as well as a national service area. Moreover, as the Commission’s discussion points out, there are differences in the circumstances affecting relocation of both BAS and FMS that will dictate distinct procedures for those two services. Therefore, finding a uniform procedure, like that used for PCS, to accommodate relocation of BAS and FMS in the 2 GHz MSS bands may be difficult. Globalstar appreciates the effort

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<sup>3</sup> See 47 C.F.R. §§ 101.69-101.81; Amendment to the Commission’s Rules Regarding a Plan for Sharing the Costs of Microwave Relocation, 11 FCC Rcd 8825, App. A (1996) (“Cost Sharing for Microwave Relocation”).

undertaken by the Commission to deal with these complex issues; however, as it modifies the Emerging Technologies procedures to accommodate MSS, the Commission should also take into account the issues discussed below.

**1. By what date should BAS and FS stations be required to relocate?**

The global MSS allocations for the 1990-2010 MHz and 2170-2200 MHz bands come into force on January 1, 2000; the MSS allocations for the 2010-2025 MHz and 2160-2170 MHz bands in Region 2 become effective on January 1, 2005, and in Canada and the United States on January 1, 2000.<sup>4</sup> BAS stations in the 1990-2025 MHz band and FMS stations in the 2165-2200 MHz band have known for four years that the Commission intended to clear these spectrum segments of terrestrial users for the benefit of MSS.<sup>5</sup> Despite these timing considerations, the Commission proposes to use a 10-year sunset period for cost reimbursement for BAS and FMS stations in these bands, and the triggering event, i.e., the start of the voluntary negotiation period for relocation costs, has not yet even occurred. Third NPRM, ¶¶ 44-45, 49.

The Commission should reconsider and substantially shorten the 10-year negotiation period. With respect to BAS, the Commission has proposed to re-channelize the entire BAS band, not just the two channels at 1990-2025 MHz which

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<sup>4</sup> RR 389A, 389C, 389D.

<sup>5</sup> See Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile Satellite Service, Notice of Proposed Rule Making, 10 FCC Rcd 3230, 3232 (1995).

have been allocated to MSS. Third NPRM, ¶¶ 36-38. Therefore, it recognizes that the most efficient method to relocate (or retune) BAS stations is to pick a date certain on which all BAS stations must come into compliance with the new channelization plan. Id., ¶ 39. As the Commission also recognizes, it does not appear feasible to permit BAS licensees to operate pursuant to the current channelization plan after that date. Id., ¶ 40. Accordingly, there is no apparent basis for the Commission to wait ten years for BAS stations to be deemed secondary in the 1990-2025 MHz band. Any obligation to reimburse individual BAS licensees for relocation costs should sunset as of the nationwide re-channelization date.<sup>6</sup>

Similarly, with respect to FMS stations, the use of an arbitrary 10-year period does not appear to be optimal. See Third NPRM, ¶ 49. First, there is potentially a long lead time in launching operational MSS systems, and, therefore, no MSS licensee may be proposing relocation to FMS licensees in the near future. Second, as the Commission points out, NWS licensees will also have an interest in relocating FMS stations. The Commission has not explained whether there would be two separate negotiation periods for MSS and NWS, or how the Commission would avoid allowing FMS licensees to pit MSS licensees against NWS licensees. Under these circumstances, it appears better policy to encourage expedited negotiations and voluntary self-relocation by setting an earlier sunset date.

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<sup>6</sup> Lengthy transition periods are arguably warranted where the licensee has relatively new equipment that it must amortize in order not to suffer economic harm from the regulatory change. Where, however, the licensee is reimbursed in  
(continued...)

## 2. Which MSS licensees should pay for relocation?

The Commission proposes that MSS licensees that cause interference to BAS and FMS stations would be required to pay the cost of relocating those stations.

Third NPRM, ¶¶ 42, 47. However, unlike PCS spectrum, the Commission will likely assign certain segments of the 2 GHz MSS spectrum to individual licensees for exclusive use and other segments to multiple licensees for co-frequency sharing.<sup>7</sup> Both sets of MSS licensees are likely to be authorized to serve a nationwide footprint rather than a specific service area.

First, MSS licensees with exclusive spectrum may need to be treated differently from MSS licensees with shared spectrum. It may be appropriate for satellite systems that can share with terrestrial incumbent stations not to pay relocation costs for incumbent stations licensed within an exclusive MSS frequency assignment. However, where two or more MSS licensees are authorized to operate co-frequency, then the cumulative effect of interference from all systems must be considered, and each system should be liable for reimbursement of the relocation costs paid by the other systems sharing the spectrum.<sup>8</sup> Imposing a reimbursement

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(...continued)

whole or in part for its relocation, the lengthy period only serves to jeopardize the financial and operational prospects of the new licensee.

<sup>7</sup> Cf. Amendment of Part 25 of the Commission's Rules to Adopt Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, 9 FCC Rcd 5936, 5954-56 (1995) (describing licensing plan for shared and unshared frequencies).

<sup>8</sup> In this instance, reimbursement could be based on the PCS cost-sharing model, including discounting reimbursement for an advantage in time of entry. See Cost-Sharing for Microwave Relocation, 11 FCC Rcd 8825, at App. A.

obligation appears necessary to capture the benefit all systems receive from relocation of terrestrial stations in a shared frequency band segment and to avoid disputes among MSS licensees in shared spectrum over responsibility for interference into terrestrial stations.

Second, with respect to BAS, the Commission has proposed a national re-channelization date for BAS stations. Such a procedure would require substantial upfront costs, including costs for relocating stations in the new BAS band, to which no MSS licensee would cause interference. Moreover, the re-channelization date may occur before many MSS licensees commence operation.

The Emerging Technologies reimbursement rules are not designed to address this contingency, that is, a set of new licensees are asked to relocate stations with which they do not and could not interfere, but which must be relocated to free up spectrum for the new licensees. Accordingly, if this proposal is adopted, the Commission should consider requiring each MSS licensee to put up an equal share of the cost of BAS re-channelization. It may be possible to apportion this financial pool based on the size of each licensee's uplink frequency assignment. See Third NPRM, ¶ 42. However, until a band plan is developed for licensing 2 GHz MSS, it is impossible to determine whether that would result in an equitable and rational apportionment. Moreover, since all MSS licensees appear to benefit equally with respect to relocation of BAS stations in the 2025-2110 MHz band by obtaining access to cleared spectrum at 1990-2025 MHz, it does not appear equitable to attempt to apportion costs for relocation of these stations in that manner.

### **3. When should liability accrue to MSS licensees?**

MSS licensees that cannot share with FMS and BAS stations will generally initiate the relocation process for incumbents before or as their satellite systems become operational. Licensees that voluntarily undertake relocation assume the liability that is associated therewith. For licensees that do not commence relocation procedures, there is a question of whether and when liability for reimbursement obligations accrue.

Generally, an MSS licensee would not derive a direct benefit from relocation of an FMS station unless its system is operational. The Emerging Technologies rules do not require a system to pay reimbursement for relocations undertaken by other systems until it is ready to commence operation.<sup>9</sup> Its liability is then determined based on a discount for date of entry.

For 2 GHz MSS licensees, a number of issues are likely to arise that may not have been encountered in the context of PCS relocations:

- For spectrum shared by two or more MSS licensees, does liability accrue without regard to whether the subsequent licensee intended to operate in the geographic area assigned to the relocated link?
- When a relocated link touched shared spectrum of two or more MSS licensees, does liability accrue to the subsequent entrant even if it could have shared its assigned frequencies with the relocated terrestrial station?
- When a relocated link touched shared spectrum of two or more MSS licensees, does liability accrue to a previous entrant even though it commenced operation without causing interference to the relocated terrestrial station?

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<sup>9</sup> See 47 C.F.R. § 24.247.

The answers to these questions are not obvious. The Commission states that it anticipates use of an objective test for whether an MSS licensee would have caused harmful interference to the relocated link similar to that developed for PCS licensees. See Third NPRM, ¶ 49. But, that test may not account for the differences in technical parameters or business plans among MSS systems operating co-frequency. Therefore, the Commission must consider whether and how to include such information in its model for evaluating the interference contributions from operational MSS systems.

**4. How should relocation costs be apportioned  
between MSS licensees and NWS licensees?**

The Commission properly points out that costs of relocating paired links in the 2115-2150/2165-2200 MHz bands should be shared between MSS licensees and NWS licensees. Third NPRM, ¶ 51. The Commission proposes that the relocation costs would be split 50/50 between the MSS and NWS licensees without regard to the time of entry of the second licensee. The Commission reasons that discounting reimbursement to account for the advantage of earlier entry, as provided in the Emerging Technologies relocation rules,<sup>10</sup> is irrelevant where two different services are involved.

While this proposal appears reasonable with respect to apportionment between MSS and NWS, the Commission must also consider apportionment among multiple MSS licensees who may benefit by the relocation. Since there are paired

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<sup>10</sup> See Cost-Sharing for Microwave Relocation, 11 FCC Rcd 8825, at App. A.



links involved, a 50/50 split between MSS and NWS appears correct. However, the 50% of the costs apportioned to MSS should be subject to reimbursement, including the time of entry discounting rule, because there may be multiple MSS licensees who benefit from relocating the link although they commence service at different times.

**5. How can the Commission ensure an efficient and effective process?**

In the relocation process for the 2 GHz MSS spectrum, there are competing incentives which could impede the process. As the Commission is aware, there is a long lead time between licensing satellite systems and placing those systems into operation. During that time period, there is no incentive for individual 2 GHz MSS licensees to relocate BAS or FMS stations because no benefit is achieved for operation of the network. The Commission is also aware that because of anticipated improvements to digital equipment (see Third NPRM, ¶ 36), terrestrial incumbents may desire to wait toward the end of the voluntary negotiation period, or later, before relocating. However, there may be a cost offset for stations relocated later in time because equipment costs are likely to decrease.

Globalstar believes that these competing incentives could affect the relocation process in unpredictable ways, for example, by penalizing those MSS operators that get to the market quickly (and must pay all costs of relocation) or possibly those that commence operations much later (and pay lower per unit costs but for many more incumbent stations that delayed relocation). These problems did not arise in

the PCS relocation context because the circumstances in which relocation responsibility accrued for PCS licensees was much more predictable.

Globalstar is not certain how these problems can be avoided and invites comment from other parties. However, adopting rules for relocation of BAS and FMS in this proceeding may require rethinking the Emerging Technologies relocation model for MSS at 2 GHz. Globalstar recommends that the Commission not foreclose revamping its procedures to take into account the differences in circumstances.

## **6. Conclusion**


As the Commission considers rules for payment of relocation costs for BAS and FMS stations at 2 GHz, Globalstar urges the Commission to take into account all the complexities of the issues involved with licensing MSS systems, including, for example, the issues raised above.

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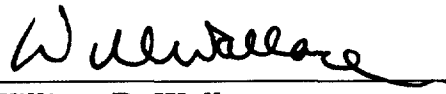
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